#include <stdio.h>

#include <string.h>

struct Book {

char title[50];

char author[50];

int book\_id;

int availability;

} books[100];

int num\_books = 0;

void add\_book() {

printf("Enter book title: ");

scanf("%s", books[num\_books].title);

printf("Enter book author: ");

scanf("%s", books[num\_books].author);

printf("Enter book ID: ");

scanf("%d", &books[num\_books].book\_id);

books[num\_books].availability = 1;

num\_books++;

printf("Book added successfully!\n\n");

}

void display\_books() {

printf("List of available books:\n");

for (int i = 0; i < num\_books; i++) {

if (books[i].availability == 1) {

printf("Title: %s\n", books[i].title);

printf("Author: %s\n", books[i].author);

printf("Book ID: %d\n\n", books[i].book\_id);

}

}

}

void borrow\_book() {

int book\_id;

printf("Enter book ID to borrow: ");

scanf("%d", &book\_id);

for (int i = 0; i < num\_books; i++) {

if (books[i].book\_id == book\_id) {

if (books[i].availability == 1) {

books[i].availability = 0;

printf("Book borrowed successfully!\n\n");

return;

} else {

printf("Sorry, book is already borrowed.\n\n");

return;

}

}

}

printf("Sorry, book ID not found.\n\n");

}

void return\_book() {

int book\_id;

printf("Enter book ID to return: ");

scanf("%d", &book\_id);

for (int i = 0; i < num\_books; i++) {

if (books[i].book\_id == book\_id) {

if (books[i].availability == 0) {

books[i].availability = 1;

printf("Book returned successfully!\n\n");

return;

} else {

printf("Sorry, book is not borrowed.\n\n");

return;

}

}

}

printf("Sorry, book ID not found.\n\n");

}

int main() {

int choice;

printf("Welcome to the Library Management System\n");

while (1) {

printf("Please select an option:\n");

printf("1. Add book\n");

printf("2. Display available books\n");

printf("3. Borrow book\n");

printf("4. Return book\n");

printf("5. Exit\n");

scanf("%d", &choice);

switch (choice) {

case 1:

add\_book();

break;

case 2:

display\_books();

break;

case 3:

borrow\_book();

break;

case 4:

return\_book();

break;

case 5:

printf("Thank you for using the Library Management System!\n");

return 0;

default:

printf("Invalid choice, please try again.\n\n");

}

}

}